

IN THE CLAIMS

Claims pending:

- 5 • At time of the Action: 1-3, 6-7, 10-11, 13-14, 18, 20-22, 25-26, 29-30, 32-33, and 37
- After this Response: 1-3, 7, 10-11, 13-14, 18, 20-22, 25-26, 29-30, 32-33, and 37

Currently Amended claims: 1, 10, 18, 20, 29, and 37

Canceled or Withdrawn claims: 6

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This listing of claims replaces all prior versions and listings:

1. (Currently Amended) An apparatus comprising a computing device having one or more processors and computer-readable storage media for interacting with a target software product having user interface functionality, comprising:

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script execution logic configured to execute a script that involves interaction with the user interface functionality of the target software product; and

manipulation tool logic that provides functionality for use by the script application logic in interfacing with the target software product,

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wherein the manipulation tool logic includes search logic configured to search for a user interface object using a plurality of different selectable search strategies and comprises event handling logic configured to monitor a firing of the user interface object and execute a callback function upon the occurrence of a specified event caused by the firing of the user interface object, wherein the event handling logic is further configured

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to block the execution of the script execution logic until a second specified event has occurred within a specified timeout period, wherein error processing is performed if the second specified event does not occur within the specified timeout period, the callback function executing a prescribed function upon the occurrence of the specified event, wherein one of the search strategies is a flag-based attribute search strategy that involves comparing a specified property value and qualifying flag information with information associated with the user interface object, wherein the flag information is configured to provide a filtering function in a search by restricting results of the search to a certain subset of results based on the flag information.

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2. (Original) An apparatus according to claim 1, wherein the manipulation tool logic is configured to interface with the target software product using a window-type interface and an accessibility interface.

5 3. (Original) An apparatus according to claim 1, wherein one of the search strategies is an SQL-type query string search strategy that involves comparing a specified string with information associated with the user interface object.

4. (Canceled)

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5. (Canceled)

6. (Canceled)

15 7. (Previously Presented) An apparatus according to claim 6, wherein the second specified event pertains to a firing of a specified user interface object or the user interface object.

8. (Canceled)

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9. (Canceled)

10. (Currently Amended) An apparatus comprising a computing device having one or more processors and computer-readable storage media for interacting with a target software product having user interface functionality, comprising:

5 script execution logic configured to execute a script that involves interaction with the user interface functionality of the target software product; and

manipulation tool logic that provides functionality for use by the script application logic in interacting with the target software product,

10 wherein the manipulation tool logic includes search logic configured to perform a flag-based attribute search strategy that involves comparing a specified attribute value and qualifying flag information with information associated with a second user interface object or the user interface object, wherein the flag information is configured to provide a filtering function in a search,

15 wherein the manipulation tool logic further comprises event handling logic configured to block the execution of the script execution logic until a specified event has occurred within a specified timeout period, wherein error processing is performed if the specified event does not occur within the specified timeout period, and

20 wherein the event handling logic is further configured to monitor a firing of a user interface object and execute a callback function upon the occurrence of the specified event or a second specified event caused by the firing of the user interface object, the callback function executing a prescribed function upon the occurrence of the specified event or the second specified event.

11. (Previously Presented) An apparatus according to claim 10, wherein the specified event pertains to a firing of a second user interface object.

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12. (Canceled)

13. (Original) An apparatus according to claim 10, wherein the manipulation tool logic is configured to interface with the target software product using a window-type interface and an accessibility interface.

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14. (Previously Presented) An apparatus according to claim 10, wherein the manipulation tool logic includes search logic configured to perform an SQL-type query string search strategy that involves comparing a specified string with information associated with a second user interface object or the user interface object.

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15. (Canceled)

16. (Canceled)

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17. (Canceled)

18. (Currently Amended) An apparatus comprising a computing device having one or more processors and computer-readable storage media for interacting with a target software product having user interface functionality, comprising:

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script execution logic configured to execute a script that involves interaction with the user interface functionality of the target software product; and

manipulation tool logic that provides functionality for use by the script application logic in interacting with the target software product,

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wherein the manipulation tool logic includes search logic configured to perform a flag-based attribute search strategy that involves comparing a specified attribute value and qualifying flag information with information associated with a second user interface object or the user interface object, wherein the flag information is configured to provide a filtering function in a search,

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wherein the manipulation tool logic further comprises event handling logic configured to monitor a firing of a user interface object and execute a callback function upon the occurrence of a specified event within a specified timeout period caused by the firing of the user interface object, the callback function executing a prescribed function upon the occurrence of the specified event, wherein an error message is generated if the specified event does not occur within the specified timeout period.

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19. (Canceled)

20. (Currently Amended) A method for interacting with a target software product having user interface functionality, comprising:

5 executing a script that involves interaction with the user interface functionality of the target software product; and

 interfacing with a manipulation tool library to carry out at least two functions specified in the script, wherein the at least two functions include:

10 searching for a user interface object using a selectable one of a plurality of different search strategies provided by the manipulation tool library, wherein one of the selectable search strategies is a flag-based attribute search strategy that involves comparing a specified attribute value and qualifying flag information with information associated with the user interface object, wherein the flag information is configured to provide a filtering function in a search; and

15 executing a callback function upon the occurrence of a specified event within a specified timeout period caused by a firing of the user interface object, the callback function executing a prescribed function upon the occurrence of the specified event and generating an error message if the specified event does not occur within the specified timeout period.

20 21. (Previously Presented) A method according to claim 20, wherein the act of interfacing with a manipulation tool library comprises interfacing with the target software product using a window-type interface and an accessibility interface.

25 22. (Original) A method according to claim 20, wherein one of the selectable search strategies is an SQL-type query string search strategy that involves comparing a specified string with information associated with the user interface object.

23. (Canceled)

30 24. (Canceled)

25. (Previously Presented) A method according to claim 20, wherein another function of the manipulation tool library comprises event handling for blocking the execution of the script until the specified event or a second specified event has occurred within a specified timeout period.

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26. (Previously Presented) A method according claim 25, wherein the specified event or the second specified event pertains to a firing of a specified user interface object or the firing of the user interface object.

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27. (Canceled)

28. (Canceled)

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29. (Currently Amended) A method for interacting with a target software product having user interface functionality, comprising:

executing a script that involves interaction with the user interface functionality of the target software product; and

interfacing with a manipulation tool library to carry out at least two functions specified in the script, wherein the at least two functions include:

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event handling for blocking the execution of the script until a specified event has occurred within a specified timeout period and generating an error message if the specified event does not occur within the specified timeout period; and

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executing a callback function upon the occurrence of a second specified event caused by a firing of a user interface object, the callback function executing a prescribed function upon the occurrence of the second specified event, wherein another function of the manipulation tool library comprises searching using a flag-based attribute search strategy that involves comparing a specified attribute value and qualifying flag information with information associated with the user interface object, wherein the flag information is configured to provide a filtering function in a search.

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30. (Previously Presented) A method according to claim 29, wherein the specified event pertains to a firing of a specified user interface object.

31. (Canceled)

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32. (Previously Presented) A method according to claim 29, wherein the act of interfacing comprises interfacing with the target software product using a window-type interface and an accessibility interface.

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33. (Previously Presented) A method according to claim 29, wherein another function of the manipulation tool library comprises searching using an SQL-type query string search strategy that involves comparing a specified string with information associated with the user interface object.

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34. (Canceled)

35. (Canceled)

36. (Canceled)

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37. (Currently Amended) A method for interacting with a target software product having user interface functionality, comprising:

executing a script that involves interaction with the user interface functionality of the target software product; and

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interfacing with a manipulation tool library to carry out at least one function specified in the script, wherein the at least one function includes:

event handling for monitoring a firing of a user interface object and executing a callback function upon the occurrence of a specified event within a specified timeout period caused by the firing of the user interface object, the callback function executing a prescribed function upon the occurrence of the specified event and generating an error message if the specified event does not occur within the specified timeout period,

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wherein another function of the manipulation tool library comprises searching using a flag-based attribute search strategy that involves comparing a specified attribute value and qualifying flag information with information associated with the user interface object, wherein the flag information is configured to provide a filtering function in a
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38. (Canceled)